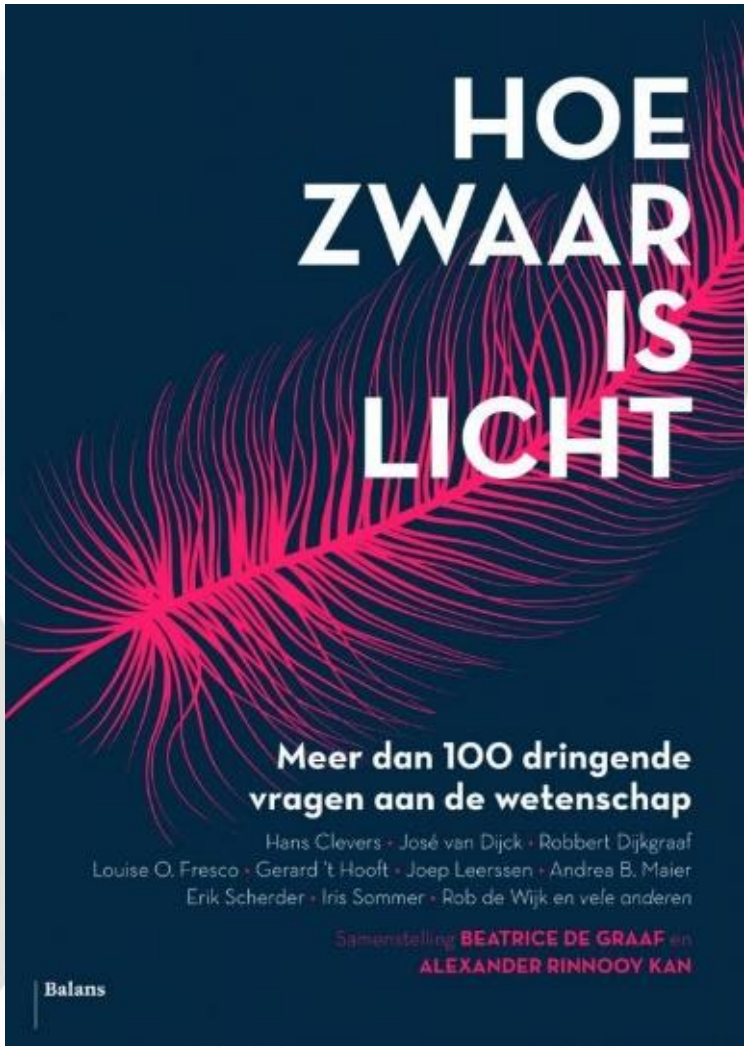
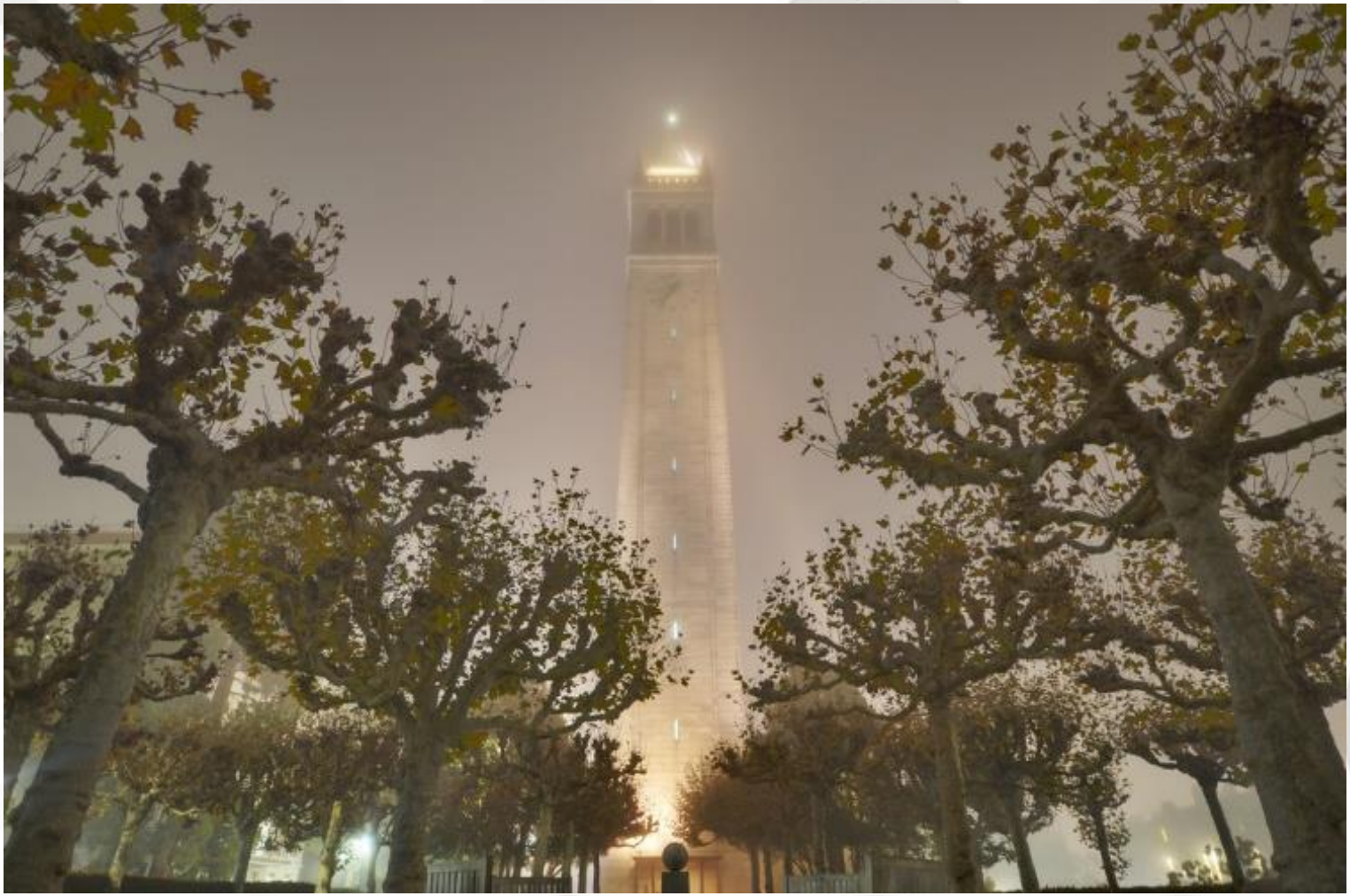
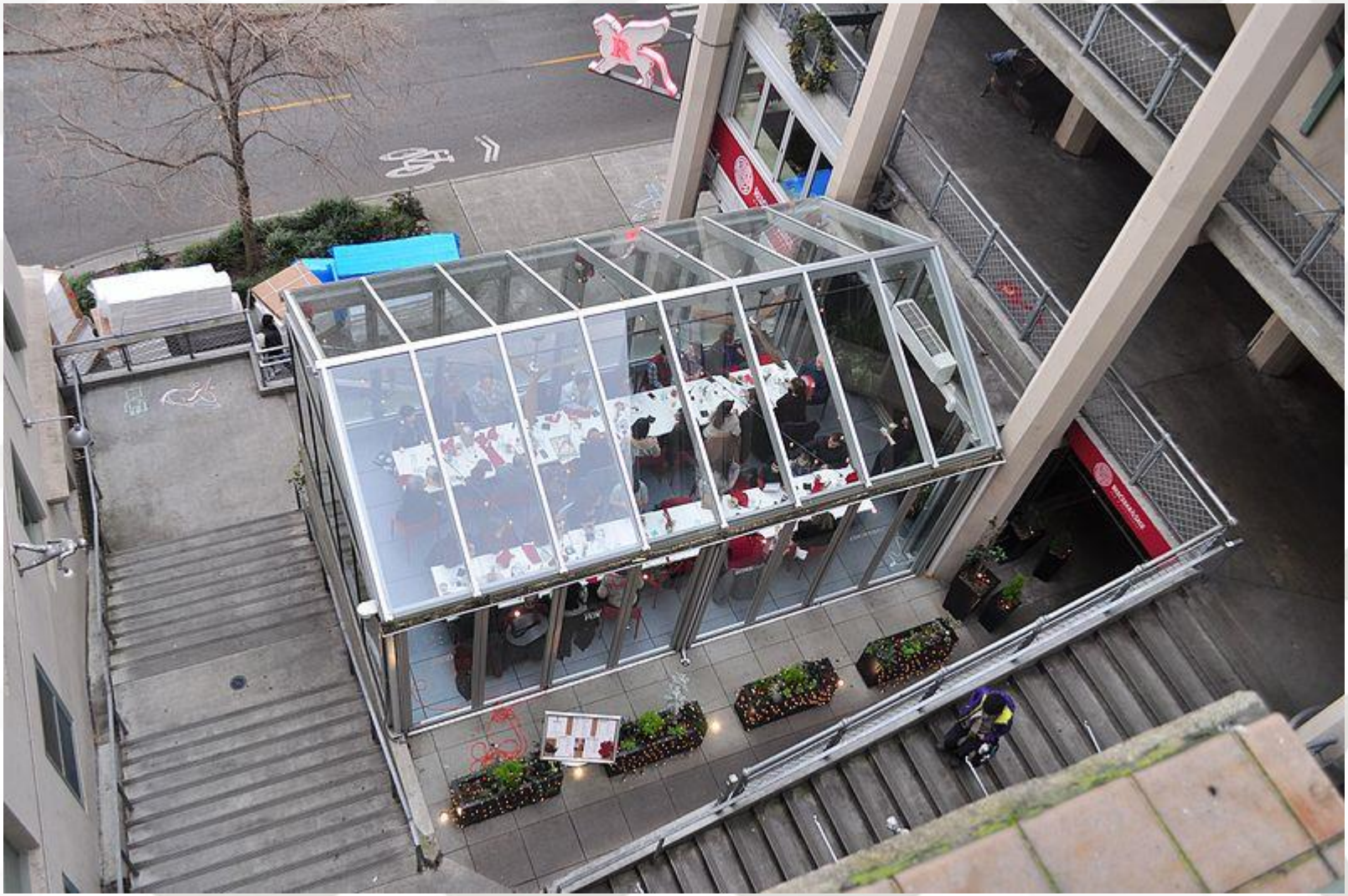
Temptation Island: Do You Need Questionable Research Practices to Survive Academia?

Rens van de Schoot


HOE ZWAAR IS LICHT
Meer dan 100 dringende vragen aan de wetenschap
Hans Clevers · José van Dijck · Robbert Dijkgraaf
Louise O. Fresco · Gerard 't Hooft · Joep Leerssen · Andrea B. Maier
Erik Scherder · Iris Sommer · Rob de Wijk en vele anderen
Samenstelling BEATRICE DE GRAAF en ALEXANDER RINNOOY KAN
Balans





https://www.youtube.com/watch?v=4c42pIxkPf4

Together with the project leader and the senior team member you are developing an article. You are in charge of the data analysis.

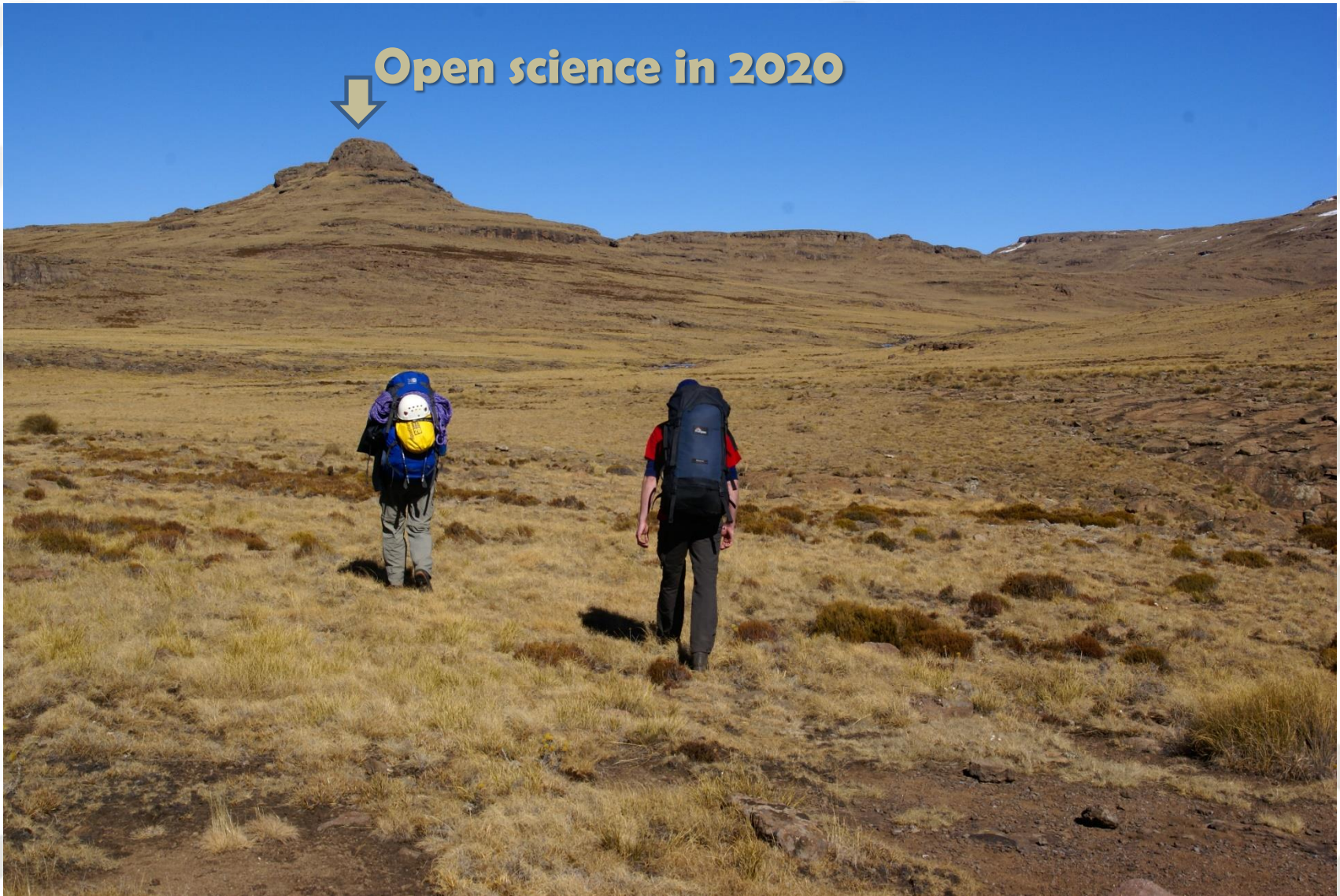
When you are working on the analysis, you discover that something is wrong with the data: you have good reasons to assume the data has been made up, most likely by the senior team member, who was responsible for data collection.

You discuss this point of concern with the senior team member.
The senior team member advises you to use the data anyway because it leads to very interesting conclusions. You figure that publishing the results based on these data might result in a very good article which will be crucial in allowing you to finish your thesis in time.

Would you (try to) publish the results coming from this research?

	Study 1 n=440 10 different faculties	Study 2 n=198; all faculties of one university	Study 3 n=127; 3 faculties in Belgium
Scenario 1: data fabrication	5.9		
Scenario 1 (revised): data fabrication		9.6	13.4
Scenario 2: deleting outliers to get significant results	12.5		
Scenario 3: Salami slicing	32.0		
Scenario 3 (revised): Salami slicing		38.6	32.8
Scenario 4: gift authorship		58.8	58.0
Scenario 5: excluding information		11.6	16.1

Sander Dekker



‘Open Science’ since 2013

- Open access publications required when funded by NWO
- VSNU is negotiating open access (>60% in 2018)
- EU: open science in Horizon2020
- ZonMw: call for *replication studies*, call for *responsible promoting research practices*

Febr. 2017

Intentional agreement to support the National Platform Open Science

Signed by: NWO, KNAW, VSNU, Vereniging Hogescholen, PNN, KB, SURF, NFU, ZonMw, GO FAIR (Naast ondertekenende instanties een voetnoot bij ‘verklaren wij bij te dragen’: DANS, DJA, DTL, GO FAIR, LCRDM, Netherlands eScience Center, NFU, 4TU.Centre for Research Data, en UKB)

2020…

- Open Access: default!
- Open Data: Promoting FAIR-principes
  - Findable
  - Accessible
  - Interoperable
  - Reusable
- No longer quantity in Standard Evaluation Protocol (KNAW, VSNU en NWO)
- Pre-registration
- And many local initiatives…

Around 8% of surveyed social and personality psychologists believe that pre-registration is not needed when researchers are honest. This reflects a poor understanding of human biases in research

journals.sagepub.com/doi/full/10.11 ...

Vertalen uit het Engels

Table 1. Frequencies and Examples of Rationales for Not Preregistering Studies

Rationale	Response rate (%)
Preregistration is not needed for exploratory research (e.g., it is not needed for pilot studies, descriptive research, or secondary data analysis)	33.33
There is no current requirement for preregistration, it does not increase validity (e.g., there is no incentive for preregistration, it is not common practice)	20.52
Preregistration is not needed if researchers are honest (e.g., preregistration creates an atmosphere of distrust, most researchers are trustworthy)	7.87
There are no resources for preregistration, researchers do not know how to preregister studies (e.g., guidelines are unclear, journals do not provide a way to preregister studies)	7.87
Preregistration is costly, is an unnecessary burden (e.g., it takes too much time, there is too much bureaucracy)	6.48
Preregistration constrains researcher degrees of freedom, ignores serendipitous findings (e.g., many interesting findings are unexpected, let the data speak)	5.40
People can still engage in unethical research practices (e.g., researchers can preregister studies after they are run and can still engage in questionable research practices)	3.24
Preregistration may result in being scooped (e.g., other researchers may run preregistered studies)	2.31
Hypotheses are "registered" elsewhere (e.g., hypotheses are registered by being included in IRB protocols or grant applications)	2.01
Other (e.g., preregistering will bias the research)	1.70
Preregistration is not needed when hypotheses are obvious or when conducting programmatic research (e.g., when theory clearly points to specific hypotheses)	1.23
Not preregistering is fine as long as researchers replicate their findings (e.g., it is not needed when results are consistent or robust)	1.08
Preregistration is not needed when studies are conducted as part of a course or for research training (e.g., graduate students' projects are intended just to help students learn the process)	1.08
Snark (e.g., preregistration is silly or idiotic)	0.93
Preregistration creates problems when reviewers and editors evaluate manuscripts (e.g., unexpected findings will be stigmatized)	0.93
Requiring preregistration overvalues confirmatory research (e.g., unregistered findings are not less valid than registered findings)	0.62

Note: A response was considered uncodable when it indicated that the researcher was unsure about the acceptability of not preregistering studies or misunderstood the question; 3.40% of the rationales for not preregistering studies were uncodable. IRB = institutional review board.

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Effectiveness, Mediators, and Effect Predictors of Internet Interventions for Chronic Cancer-Related Fatigue: The Design and an Analysis Plan of a 3-Armed Randomized Controlled Trial

Monitoring Editor: Gunther Eysenbach

Reviewed by Lei Zhu

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Abstract

Go to:

Background

Internet interventions offer advantages that especially cancer survivors who suffer from fatigue could benefit from. Given the growing number of such patients, Internet interventions could supplement and strengthen currently available health care.

Objective

This paper describes the design and analysis plan that will be used to study 2 Internet interventions aimed at reducing severe fatigue in cancer survivors: a mobile ambulant activity feedback therapy supported through a weekly email by a physiotherapist and a weekly Web- and mindfulness-based cognitive therapy supported online by a psychologist. The data resulting from this trial will be used to (1) investigate the

Analysis Plan

Overview SPSS software will be used for data management and Mplus [79], which is a latent variable modeling program, for the subsequent analyses. The exact versions of the software used will be reported in the future papers.

Pre-Analysis

Power Analyses The sample size for analyses for data relating to the primary objective has been calculated for a repeated measures analysis of variance: based on an alpha of .05, a minimal detectable effect size of f2=.15, and a power of .80, a total number of 55 participants [80] is required in each group to answer the primary research question of this study in a statistically valid manner.

We expect to be able to include 330 eligible participants within a period of 2 years, based on a mean of 3.7 intakes per week for the eMBCT of the Helen Dowling Institute in 2011. An estimated attrition of 30% of the participants during both experimental interventions and 15% during the minimal intervention control condition [51] would leave us with 77 participants in each experimental group and 94 participants in the control group at T2. Again, we expect a dropout rate of 30% during the second semester. Such a dropout would leave a total of 110 participants completing each experimental intervention. Ten percent of the participants may have to be excluded from the analyses because of recurrence or diagnosis of metastasis. That would result in 198 participants that complete the full trial. We expect that this number will be enough for testing the 6 mediating factors or effect predictors: A classical, conservative power calculation (analysis of variance for testing 6 mediators or effect predictors with an intermediate effect size (f2=.08), corrected according to Bonferroni (alpha=.05/6), and at a power of .80 [81]) would result in approximately 254 participants being needed. We expect that the actual power when including 198 participants, and not the required 254 participants, will be great enough to detect up to 6 mediators or effect predictors with the use of Bayesian statistics [76]. Bayesian statistics allow analysis on small sample sizes [76,77], as more power

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This paper is in the following e-collection/theme issue:
Web-based and Mobile Health Interventions Innovations and Technology in Cancer Care
Fitness Trackers and Smart Pedometers/Accelerometers

Original Paper

Effectiveness of Two Web-Based Interventions for Chronic Cancer-Related Fatigue Compared to an Active Control Condition: Results of the "Fitter na kanker" Randomized Controlled Trial

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Physical Behavior Profiles in Chronic Cancer-Related Fatigue

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First Online: 11 July 2017

Abstract

Purpose

Increasing physical activity level is a generally effective intervention goal for patients who suffer from chronic cancer-related fatigue (CCRF). However, patients are unlikely to benefit equally from these interventions, as their behavioral starting points might vary substantially. Therefore, we explored patterns of physical behavior of participants who suffer from CCRF.

Methods

Baseline data of a randomized controlled trial were used for a latent profile analysis on nine accelerometer-derived physical behavior measures, describing levels and patterns of physical activity, moderate-to-vigorous intensity physical activity (MVPA), and sedentary behavior. The relation between participant characteristics and the latent profiles was analyzed.


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